CJHR

Caspian Journal of Health Research

journals homepage: cjhr.gums.ac.ir

The Relationship between General Health and Emotional Intelligence among Students in Yazd University of Medical Sciences

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ARTICLE INFO

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ABSTRACT

Objectives: Psychological needs and health of students are of particular importance. Therefore, this study aimed to investigate the relationship between general health and emotional intelligence among students in Yazd University of Medical Sciences.

Methods: In this descriptive-correlational study, 220 students were randomly selected from different fields. Goldberg General Health Questionnaire and *Bar-On Emotional Quotient* Inventory were used to collect data. Pearson's correlation coefficient, regression analysis, and independent t-test were used to analyze the data.

Results: A significant negative correlation was observed between emotional intelligence and general health components. Also, a significant positive correlation was found between age and emotional intelligence, but there was no significant correlation between age and general health components. Components of anxiety and insomnia, social dysfunction, and depression altogether explained 31.2% of the variance of emotional intelligence. There was no significant correlation between general health and educational level, but there was a significant correlation between emotional intelligence and educational level (p≤0.03).

Conclusion: There was a positive correlation between general health and emotional intelligence. The students having higher levels of emotional intelligence and general health can establish healthier and more successful interpersonal relationships with others.

Introduction: Many students consider being admitted to a university a major change that can be associated with anxiety and stress. Accepting new roles and major changes in their lives [1, 2] are leading causes of stress, which can affect their academic performance [3,4], and their physical and mental health [5, 6]. Any changes in one's life require readjusting to conditions. However, new students are usually more vulnerable to problems and their health is at a greater risk [7]. A person's success in education both at school and later at university is not associated only with their intelligence quotient (IQ), but also with the social and emotional skills of the emotional intelligence, such as being motivated, the ability to wait, obeying the orders and controlling impulses, the skill of asking others for help and expressing the emotional and educational needs [8].

In recent decades, the emotional intelligence and its attractive and broad aspects have attracted the attention of psychologists, psychiatrists and the public. Applying the concept of social intelligence dates back to the 1940s. Then, Mayer and Salovey described the term "deliberate role" in the theory of "multiple intelligences" [9, 10]. Based on Gardner's theory of multiple intelligences, there are two major types of intelligence: first, one's internal intelligence and awareness that allows them to identify and differentiate between human complex emotions. Second, one's knowledge and awareness about interpersonal relationships that enables them to identify and distinguish others' emotions and motives. Finally, Goleman widely described and introduced this concept to the public [8]. The current attention to emotional intelligence originates from research related to human capabilities. In the 1980s, there were some different perspectives on the analysis of the concept of intelligence. Strasberg tried to highlight the creative and practical aspects of intelligence and Gardner defined intelligence as having various aspects. According to Mayer and Salovey, emotional intelligence is a kind of social intelligence and includes the person's power to control one's emotions and perception of themselves and others [10].

Good performance in emotional intelligence can predict one's success and progress [11], such that people with high emotional competence have better social skills, more reliable long-term relationships, and a greater ability to resolve conflicts. People with high emotional intelligence have lower levels of stress hormones and other indicators of emotional arousal [12]. Generally, the basic components of emotional intelligence include the perception of emotions in oneself and others, understanding and reasoning about emotions, and management of emotions [13]. From a practical perspective, theorists believe that the components of emotional intelligence – perception of emotions, regulation of emotions, and application of emotional intelligence are associated with psychological adjustment, success and prediction about it, and overall satisfaction with life [14].

Emotional intelligence is a factor through which a person can unlock his capabilities to succeed in life and is associated with emotional health and mental health, in general [15]. According to the World Health Organization, 10% of the adults suffer from mental disorders [16]. Mental disorders have been reported as 21% in adults and 17.6% in people aged 15-24 years in Iran [18]. Some studies conducted on general health have reported mental disorders as 12.75% to

30.4% among students [16, 17]. Due to the significance of this social stratum, students, and providing the ground for their success, and since one's educational success can be influenced by his emotional intelligence and mental health [5, 7], this study aimed to examine the relationship between general health and emotional intelligence among students.

Material and Methods: This is a descriptive-correlational study, for which 220 students were randomly selected from different fields. Several questionnaires were used to collect the data including a questionnaire for demographic data, such as age, gender, and field of study, Goldberg General Health Questionnaire and Bar-On Emotional Quotient Inventory.

Bar-On Emotional Quotient Inventory: This self-report scale was developed based on the Bar-On model of emotional-social intelligence for assessing behaviors related to emotional and social intelligence [12]. Bar-On emotional quotient inventory consists of 90 items and each item is rated from 1 to 5 (5: strongly agree, 1: strongly disagree) and some of the items with negative content are rated from 1 to 5 (1: strongly agree and 5: strongly disagree). The total score of each subscale equals the sum of the scores of the questions of that subscale and the total score of the questionnaire equals the sum of the scores of the 15 components. This questionnaire has five subscales, all of which totally include 15 components. These five subscales are as follows: 1. Intrapersonal subscale (including emotional self-awareness, assertiveness, self-regard, self-actualization, and independence components); 2. Interpersonal subscale (including empathy, social responsibility,

and interpersonal relationship components); 3. Stress management subscale (including stress tolerance and impulse control components); 4. Adaptability subscale (including problem-solving, reality testing, and flexibility components); 5. General mood subscale (consisting of the optimism and happiness components).This questionnaire was standardized on the students of Tehran University in Iran and its internal consistency was obtained 0.73 [18]. In this study, the Bar-On Emotional Quotient Inventory was used to measure the emotional intelligence and its components, and the reliability of the questionnaire was reported as 0.89 using the test-retest methods.

General Health Questionnaire: Although mental health is an essential part of health, there is no accurate means for measuring it [12]. Several questionnaires have been developed for this purpose, including the General Health Questionnaire (GHQ) [19] that is a self-report screening method and is used for diagnosing mental disorders. This questionnaire does not aim to achieve a specific diagnosis in the chain of mental disorders, but to make a distinction between health and mental disorders [20].

GHQ 28, developed by Goldberg, was used to assess the general health. This questionnaire consists of 4 subscales. Items 1 to 7 pertain to the physical symptoms subscale, items 8 to 14 pertain to the anxiety and insomnia subscales, items 15 to 21 pertain to the social dysfunction subscale, and items 22 to 28 pertain to the depression subscale, which altogether show the psycho-physical condition of a person over the past month. All questions have 4 options, the scores of which range from 0 to 3 (0, 1, 2, 3). Scores higher than 23 in this questionnaire

represent mental disorders and scores lower than 23 indicate mental health. The scores range from 0 to 84. Taghavi used 75 students of Shiraz University to examine the reliability of this questionnaire. The reliability coefficients of this questionnaire were calculated as 0.70, 0.93, and 0.90, respectively, using Cronbach's alpha [16]. Correlation coefficients between the subscales of this questionnaire and the total score varied between 0.72 and 0.87 which were acceptable. Factor analysis indicated the presence of depression, anxiety, social dysfunction, and physical symptoms in this questionnaire which altogether explained more than 50% of the total variance of the questionnaire [21]. In this study, the Cronbach's alpha was reported as 0.80 for the questionnaire.

Findings: Descriptive analysis of the variables of the general health and emotional intelligence is shown in Table 1 separately for male and female students. According to Table 2, there was a significant negative correlation between students' emotional intelligence and their general health components. A significant positive correlation was also observed between age and emotional intelligence, but there was no significant correlation between age and general health components.

Table1. Descriptive indicators of the variables of the general health and emotional intelligence according to the gender of the students

General health Index Emotional intelligence Gender	Mean	SD	Mean	SD
Male	20.32	11.03	322.67	40.32
Female	19.22	11.33	327	35.95

Table2. Correlation matrix between the variables of general health, emotional intelligence, and age

Variables	Emotional intelligence	Physical function	Anxiety and insomnia	Social dysfunction	depression	Age
Emotional intelligence	1					
Physical function	-0.346**	1				
Anxiety and insomnia	-0.456**	0.620**	1			
Social dysfunction	-0.470**	0.293**	0.467**	1		
depression	-0.438**	0.527**	0.572**	0.491**	1	
Age	0.135*	0.028	-0.004	-0.013	-0.045	1

Table3. Multiple regression analysis of the variance of emotional intelligence through the general health

Predictors	B	β	t	p	F	Coefficient of determination
Physical function	-0.594	-0.059	-0.778	0.4		
Anxiety and insomnia	-1.791	-0.200	-2.479	0.01		
Social dysfunction	-3.546	-0.284	-4.190	0.001	24.283	0.312
Depression	-1.576	-0.153	-2.01	0.04		

P<0.01*

P<0.05**

Results: According to the results, 189 subjects (85.9%) were women and 31 (14.1%) were men. The mean age of the participants was 21.7±2.68 years, most of whom (80%) aged between 18-25 years. Among all, 205 participants (93.2%) were single and 15 (6.8%) were married. In terms of faculty, 107 students (48.6%) were selected from the School of Public Health, 40 (18.2%) were from the School of Paramedical Sciences, 28 (12.7%) were from the School of Nursing and Midwifery, 29 (13.2%) were from the School of Medicine, and 14 (6.4%) were from the School of Dentistry.

According to the results, the components of anxiety and insomnia, social dysfunction, and depression altogether explained 31.2% of the variance of emotional intelligence. To evaluate the difference between the mean score of emotional intelligence and general health in female and male students, the independent t-test was used. The results indicated that there was no significant difference between the mean score of emotional intelligence and general health in terms of gender.

Discussion and Conclusion: In this study, a significant negative correlation was observed between the general health components and emotional intelligence, such that the lower the general health mean score (indicating greater levels of general health), the higher the emotional intelligence. This result was consistent with previous studies [24-25-26]. This correlation may be due to the fact that the components of emotional intelligence, including management of emotions, evaluation of our own and others emotions, empathy, and emotional flexibility are features that exist in healthy people to a greater extent than other people. Controlling emotions mentally relax the person and reduce stress. Emotional flexibility allows a person to react appropriately in different situations in life which can reduce anxiety and guarantee psychophysical health of the person. Students need mental health to solve problems and some studies have indicated the relationship between these two variables [27]. Based on the results obtained and other

research, the general health subscales, including social function, depression, anxiety, and physical function determine and affect the level of emotional intelligence.

The results showed that the emotional intelligence increases with age. However, in some studies, there was an inverse relationship between age and emotional intelligence [26]. In this study, there was no correlation between age and general health, which was consistent with previous studies conducted in Tehran and the United States [15, 27] and Ansari's study [15].

The results indicated the emotional intelligence of women was greater than that of men, but this difference was not significant. In other words, women and men use the same emotional intelligence when facing everyday problems. Another study indicated that there was a difference between men and women in emotional intelligence subscales, but there was no significant difference in the total score of emotional intelligence [29]. By conducting a study on men and women, Bar-On [12] reported no difference in the total score of emotional intelligence. According to Furnham's study [29], there was no difference between men and women in the total score of emotional intelligence. The results of studies conducted by Fallah-zadeh [30], Brackett, Gustello, Reiff, and Shwuming also confirmed this matter [31, 32, 33, 34].

This study showed that the general health status in male students was higher than that in female students, but this difference was not significant. Ansari et al. reported a significant difference between gender and general health, such that female students suffered more anxiety compared to male students [15, 35].

The results of this study indicated no significant correlation between marital status and general health, as well as between marital status and emotional intelligence. No significant correlation was also found between general health and educational level, but there was a significant correlation between emotional intelligence and educational level. Ansari also reported no significant correlation between general health and educational level which was in line with our study.

In general, it can be stated that people with higher emotional intelligence have greater general health. They can establish healthier and more successful interpersonal relationships with others and attract others' satisfaction. Therefore, it is essential to identify emotional intelligence of the students, who are the future of the country.

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